

Title (en)
RADIO TERMINAL, RADIO STATION, AND METHOD PERFORMED THEREBY

Title (de)
FUNKENDGERÄT, FUNKSTATION UND DADURCH DURCHGEFÜHRTES VERFAHREN

Title (fr)
TERMINAL RADIO, STATION RADIO, ET PROCÉDÉ AINSI MIS EN UVRE

Publication
EP 3509380 A1 20190710 (EN)

Application
EP 19153838 A 20150713

Priority
• JP 2014262541 A 20141225
• EP 15872116 A 20150713
• JP 2015003524 W 20150713

Abstract (en)
A radio terminal (3) includes: a wireless transceiver (2001) configured to communicate with one or more radio stations using a licensed frequency and an unlicensed frequency; and at least one processor (2002). The at least one processor (2002) is configured to recognize whether LBT on the unlicensed frequency prior to uplink transmission needs to be performed, start the uplink transmission on the unlicensed frequency after performing the LBT when the LBT is needed, and start the uplink transmission without performing the LBT when the LBT is not needed. As a result, for example, the radio terminal can adaptively cope with the situation in which Listen Before Talk (LBT) by the radio terminal is needed and the situation in which it is not needed.

IPC 8 full level
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CPC (source: EP US)
H04W 16/14 (2013.01 - US); **H04W 72/0446** (2013.01 - US); **H04W 72/21** (2023.01 - US); **H04W 72/23** (2023.01 - US);
H04W 74/006 (2013.01 - EP US); **H04W 76/27** (2018.02 - US); **H04W 74/0808** (2013.01 - EP US); **H04W 84/12** (2013.01 - US)

Citation (applicant)
• US 7443821 B2 20081028 - CAVE CHRISTOPHER [CA], et al
• JP 2014262541 A 20141225
• "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Evolved Universal Terrestrial Radio Access (E-UTRA) and Evolved Universal Terrestrial Radio Access Network (E-UTRAN); Overall description; Stage 2 (Release 12", 3GPP TS 36.300, September 2014 (2014-09-01)
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• "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Evolved Universal Terrestrial Radio Access (E-UTRA); Radio Resource Control (RRC); Protocol specification (Release 12", 3GPP TS 36.331, September 2014 (2014-09-01)
• "Views on issues related to LAA UL", 3GPP RL-144970, November 2014 (2014-11-01)
• "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Evolved Universal Terrestrial Radio Access (E-UTRA); Physical layer procedures (Release 12", 3GPP TS 36.213, September 2014 (2014-09-01)
• "3rd Generation Partnership Project; Technical Specification Group Radio Access Network; Study on Small Cell enhancements for E-UTRA and E-UTRAN; Higher layer aspects (Release 12", 3GPP TR 36.842, December 2013 (2013-12-01)

Citation (search report)
• [YA] US 2014362780 A1 20141211 - MALLADI DURGA PRASAD [US], et al
• [XY] CATT: "Listen before talk for LAA", vol. RAN WG1, no. San Francisco, USA; 20141117 - 20141121, 17 November 2014 (2014-11-17), XP050875712, Retrieved from the Internet <URL:http://www.3gpp.org/ftp/Meetings_3GPP_SYNC/RAN1/Docs/> [retrieved on 20141117]

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EP 3240346 A1 20171101; **EP 3240346 A4 20180808**; **EP 3240346 B1 20210901**; CA 2972227 A1 20160630; CA 2972227 C 20210907;
CN 107113801 A 20170829; CN 107113801 B 20210601; CN 113438742 A 20210924; EP 3509380 A1 20190710; JP 2019110609 A 20190704;
JP 2021040340 A 20210311; JP 6790830 B2 20201125; JP 6806181 B2 20210106; JP 7230898 B2 20230301; JP WO2016103533 A1 20171012;
US 10849153 B2 20201124; US 2017339717 A1 20171123; US 2021037564 A1 20210204; WO 2016103533 A1 20160630

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EP 19153838 A 20150713; JP 2015003524 W 20150713; JP 2016565863 A 20150713; JP 2019075290 A 20190411;
JP 2020196742 A 20201127; US 201515534712 A 20150713; US 202017073889 A 20201019